

http://www.postbulletin.com/news/local/rpu-chooses-boldt-to-build-new-million-plant/article_1f6c9fba-5d08-5944-b300-47299c9d3052.html

RPU chooses Boldt to build new \$62 million plant

Posted: Wednesday, February 24, 2016

Jeff Kiger, jkiger@postbulletin.com

The Rochester Public Utility Board flipped the switch Tuesday to fire up the construction of a new peaking power plant in the northwest quadrant.

The board chose Boldt Co.'s \$32.2 million bid to engineer and build the new plant to be called Westside Energy Station.

Wisconsin-based Boldt, working with Sargent & Lundy, was selected as the top bidder. The peaking power plant is slated to be built at 5846 19th St. NW.

Wally Schlink, RPU's director of power resources, said the "aggressive schedule" calls for the new plant to be operational by May 1, 2018.

Factoring the rest of the costs for the Westside Energy Station, Schlink told the board the total cost should be \$62.6 million. That's below the estimated \$75 million budgeted for the project.

The board previously approved buying five reciprocating engine generators from the U.S. arm of the Finland-based Wartsila for \$22.5 million. The engines run on natural gas.

Boldt, which has had a large office in Rochester since 2008, beat out four other bidders for the contract. Boldt's proposal breaks down as \$3,798,289 as "a firm price" for engineering and construction management, \$28,437,922 for the balance of the project and \$6,447,242 for contingency to cover variables such as material costs or changes.

Boldt formed a team with power plant experts Sargent & Lundy of Chicago to bid the project as the Westside Energy Partners.

Of the bidders that RPU staff deemed suited to handle the project, the other top competitor for the bid was Burns & McDonnell of Kansas City, Mo. Burns & McDonnell did the preliminary engineering study on the project for RPU.

"Boldt and Burns were neck and neck," Schlink said.

In the end, the difference came down to cost. Burns bid a total of \$37.2 million to build the Westside plant.



A New Generating Station for Rochester

By Kim David February 23, 2016 6:22 PM



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RPU Westside Substation-photo by Kim David/Townsquare Media

Rochester, MN (KROC AM News) -- Construction work is expected next year on a major Rochester Public Utilities project.

The RPU Board Tuesday approved a staff request to negotiate a contract with The Boldt Company for the engineering and construction of the utility's planned new energy plant.

The natural gas-fired plant will be located at the site of RPU's existing Westside Substation along 19th St NW, about two miles west of West Circle Drive.

The plant will be capable of producing 47 megawatts of power which will be sold on the open market or used during peak energy times in the city. The project -- called the

Westside Energy Station -- was approved last year and has an overall budget of \$75 million.

RPU's Director of Power Resources says the five engines that will generate the power were ordered earlier. Wally Schlink says the contract for the engines was \$22.5 million. The Boldt contract is for \$38.7 million, which leaves the overall budget well below the amount that was set last year. Schlink says it's hoped the plant will go online in May 2018.

The RPU Board was also scheduled to vote on a contract for the construction of a new substation to serve the Mayo Clinic Data Center located along West Circle Drive. The extra energy will be needed to accommodate future growth of the center. The new substation will also be used by RPU to meet the growing energy demands in that part of the city. But the board rejected all bids and new ones will be sought at a later date.

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SPONSORS

RESULT:	ADOPTED [UNANIMOUS]
MOVER:	Roger Stahl, Board Member
SECONDER:	Dave Reichert, Board Member
AYES:	Jerry Williams, Dave Reichert, Roger Stahl, Mark Browning
EXCUSED:	Michael Wojcik

2. West Side Energy Station – Project Approval and Approval of Professional Services

Wally Schlink, Director of Power Resources, introduced Mike Borgstadt and Megan Parsons from Burns and McDonnell. They presented the Preliminary Engineering Study for Installation of a Peaking Resource.

Resolution: West Side Energy Station – Project Approval and Approval of Professional Services

The Board approved the resolution reading as follows:

WHEREAS the Public Utility Board of the City of Rochester, Minnesota was presented, accepted and placed on file the 2015 Update to the RPU Infrastructure Plan at their June 30, 2015 meeting and;

WHEREAS the 2015 Update to the Infrastructure Plan demonstrated the need and appropriateness of the addition of approximately 50 megawatts of peaking generation to the Rochester system; and

WHEREAS consensus was voiced and funds committed in support of proceeding with the Preliminary Engineering Study to be conducted by Burns & McDonnell for the development of a project scope document for the West Side Energy Station Project at the July 28, 2015 RPU Board meeting; therefore

BE IT RESOLVED by the Public Utility Board of the City of Rochester, Minnesota, approving the resolution for:

- Accept the results of the Preliminary Engineering Study and place on file*
- Grant approval to proceed on the development of the project identified as the*

West Side Energy Station Project

- Approve professional services provided by Burns & McDonnell for development of a specification, evaluation, recommendation and deliverables for the procurement of the recommended generation resources in an amount not to exceed \$60,000*

Passed by the Public Utility Board of the City of Rochester, Minnesota, this 25th day of August, 2015.

3. Issuance of Electric Utility Revenue Bonds

Peter Hogan, Director of Corporate services, presented the parameters resolution for the issuance of Electric Utility Revenue Refunding Bonds.

The resolution will go to the City Council naming a pricing committee which will include Peter Hogan, Dale Martinson, and Springstead Inc.

The result will be an overall cost savings of \$3.5-4 million for RPU rate payers.

Minutes Acceptance: Minutes of Aug 25, 2015 4:00 PM (Approval of Minutes)

Resolution: Issuance of Electric Utility Revenue Bonds

The Board approved the resolution reading as follows:

Resolution Approving and Consenting to

the Issuance of Electric Utility Revenue Refunding Bonds, Series 2015E

by the City of Rochester, Minnesota

BE IT RESOLVED By the Public Utility Board (the "Board") of Rochester Public Utilities ("RPU") as follows:

1. Recitals.

(a) The City of Rochester, Minnesota (the "City"), in cooperation with the Board, has heretofore issued its Electric Utility Revenue Bonds, Series 2007C (the "Series 2007C Bonds") to finance the construction and installation of certain emission control facilities and various improvements (collectively, the "Improvements") to the City's municipal electric utility (the "Electric Utility").

(b) The Board has determined that it is in the best interests of RPU and the City to provide for a current refunding of the Series 2007C Bonds and to issue the City's Electric Utility Revenue Refunding Bonds, Series 2015E in an aggregate principal amount not to exceed \$50,000,000 (the "Bonds") to provide funds to refund the Series 2007C Bonds;

2. Request, Consent and Approval.

(a) The Board hereby requests that on September 9, 2015, or as soon thereafter as possible, the Rochester Common Council (the "Council") consider a Resolution Authorizing the Sale of the City's Electric Utility Revenue Refunding Bonds, Series 2015E and Providing for Their Issuance (the "Resolution") to provide funds to refund the Series 2007C Bonds;

(b) The Resolution would, upon its adoption, (I) authorize the issuance of the Bonds in an aggregate principal amount not to exceed \$50,000,000, and delegate to a pricing committee the authority to negotiate with Barclays Capital Inc., as representative of the participating underwriter(s) (i) the maturity schedule for the Bonds with a final maturity no later than December 1, 2030, (ii) the rates of interest on the Bonds, (iii) any redemption provisions, and (iv) other details of the Bonds which result in debt service savings such that the net present value benefit to refunded debt service is no less than 3.00%, (II) pledge the Net Revenues of the Electric Utility for the payment of the Bonds, and (III) set forth other covenants and obligations of the City relating to the Electric Utility; and

(c) The Resolution, in the form actually adopted, is hereby

incorporated into this Resolution to the same extent as though set forth in full herein, and each capitalized term which is used in this Resolution but not otherwise defined herein shall have the meaning given to that term in the Resolution.

- (d) *The Board hereby consents to and approves the issuance of the Bonds, and determines that the issuance of the Bonds by the City is necessary and desirable and that the issuance of the Bonds is appropriate for the purposes for which the Bonds are issued and hereby authorizes and requests that City issue the Bonds.*
- (e) *The Board hereby concurs in the award, issuance and sale of the Bonds and joins in and concurs in the adoption of the Resolution, and adopts all of the covenants and agreements contained therein with the same force and effect as if said Resolution had been adopted by the Board.*
- (f) *The approval hereby given to the Resolution includes approval of such additional details therein as may be necessary and appropriate and such modifications thereof, deletions therefrom and additions thereto as may be necessary and appropriate and approved by the Pricing Committee described therein.*
- (g) *The Board hereby covenants and pledges to cooperate with the Council (and to take such actions, or refrain from acting, as the case may be, as may be necessary) in order to fully effectuate the intent, purposes and obligations of the City under the Resolution.*

Passed by the Public Utility Board of the City of Rochester, Minnesota, this 25th day of August, 2015.

4. Water Utility Cost of Service Study & Rate Discussion

Peter Hogan, Corporate Services Director presented the background from the previous rate discussion in June. The board provided direction from June has been provided on the rate schedule. Additional questions can be answered at the September 10th study session.

At the September 29th meeting the board will be asked to authorize notice of proposed rate changes to the public and then approval at the October 28th meeting.

5. Consideration Of Bids

1. Consideration of Bids - Construction of Well House #41

Doug Klameris, Senior Civil Engineer presented the bids for the construction of well house #41.

The bids came in higher than estimated, but still within budget. The completion date is expected to be December 31, 2015.

Resolution: Construction of Well House #41

The Board approved the resolution reading as follows:

BE IT RESOLVED by the Public Utility Board of the City of Rochester, Minnesota,

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FOR BOARD ACTION

Agenda Item # (ID # 4493)

Meeting Date: 9/29/2015

SUBJECT: Common Council Resolution Adopting Limited §453 Powers for the West Side Energy Station Project

PREPARED BY: Wally Schlink

ITEM DESCRIPTION:

The RPU Utility Board, at their regularly scheduled meeting on June 30, 2015, accepted and placed on file the 2015 Update to the RPU Infrastructure Plan. A key component of the plan was the additional of peaking generation to the RPU fleet with a commercial operation date of 2018 / 2019.

At the July 28, 2015 meeting the RPU Board approved a proposal to perform a Preliminary Engineering Study which would address site location, technology selection, contracting approaches, permitting requirements, cost projections and project schedule. The results of the Study were presented to the Board at the August 25, 2015 Utility Board meeting. At the same August 2015 meeting the Board approved the request to proceed with the project.

Based on the results of the Preliminary Engineering Study and discussions with our engineers, staff has recommended that a 2 Contract - Engineer, Procure, and Construct Open-Book contract approach would best fit the scope of this project and would provide superior results for the City and the ratepayers of RPU. This approach aggregates dozens of agreements under a single source of responsibility and is a commonly used contracting approach in the electric generation construction industry.

The project team is anticipated to comprise of an engineer firm or general contractor, an original equipment manufacturer supplying the peaking engines and Rochester Public Utilities / the City of Rochester. The multiple participants, the complex and unique nature of the project and the multiple contracts that will be needed to be executed present some unique challenges that are not common to our more straight forward internal projects.

During the CAPx transmission project the Utility Board and City Council determined that the powers granted under the Municipal Electric Power statute was the preferable approach to the project and those governing bodies executed a resolution adopting the limited use of these powers as required by the statute. The same action was taken by the RPU Board for the ERP relocation project.

The West Side Energy Station Project has many attributes in common with the previous projects including the multiple partners from both private and the public sector, the complexity of the scope of the project and the various agreements that may have to be executed for project formation and execution.

FOR BOARD ACTION

Agenda Item # (ID # 4493)

Meeting Date: 9/29/2015

Chapter 453 Municipal Electric Power was intended to provide a means for Minnesota cities which own and operate a utility an adequate, economical and reliable supply of energy. The Minnesota legislature determined that the exercise of the powers granted by Chapter 453 will benefit the people of the state and serve a valid public purpose in improving and otherwise promoting their health, welfare, and prosperity.

Following the project requirement review, staff has determined that using the same project governance that is granted under the Municipal Electric Power statute 453.51 - 453.62 would be the most efficient, effective and financially beneficial governance for the project and staff recommends that the Board approve and recommend approval of the resolution to the Common Council that authorize the utility to enter into the West Side Energy Station Project exercising the powers granted by the resolution.

UTILITY BOARD ACTION REQUESTED:

Staff recommends that the RPU Board approve the Resolution Adopting Limited §453 powers for the West Side Energy Project and recommend ratifying by the Common Council.



RESOLUTION

WHEREAS, the City of Rochester wishes to participate in the West Side Energy Station Project; and

WHEREAS, the West Side Energy Station Project consists of various activities ultimately used to provide capacity and energy through construction of a generation facility; and,

WHEREAS, the West Side Energy Station Project is intricate, complex, and unique requiring multiple project participants within and without the State of Minnesota and requiring the planning, acquisition and construction of a generation facility which includes design, engineering, procurement, construction, project management and erection of equipment, systems and all appurtenances; and,

WHEREAS, Minn. Stat. §453.58, subd. 1, authorizes the City to exercise any of the powers granted to a municipal power agency in Minn. Stat. §§453.51 - 453.62 notwithstanding any provision of any city charter or any other law denying, limiting, or placing conditions upon the exercise of any such power; and,

WHEREAS, the City has previously exercised the powers granted under Chapter 453 of the 2013 Minnesota Statutes Municipal Electric Power in prior projects and has found those powers to be the most effective process for joint participant electric power projects; and,

WHEREAS, Minn. Stat. 453.54, subd. 2, states that a City may plan, acquire, construct, reconstruct, operate, maintain, repair, extend, or improve one or more projects within or outside the state; and,

WHEREAS, Minn. Stat. 453.52, subd. 10 defines "Project" to mean "any plant, works, system, facilities, and real and personal property of any nature whatsoever, together with all parts thereof and appurtenances thereto, used or useful in the generation, production, transmission, purchase, sale, exchange, or interchange of electric energy or any interest therein or capacity thereof;" and,

WHEREAS, the West Side Energy Station Project satisfies the definition of a Project as a system used or useful in the generation of electric energy and,

WHEREAS, in participating in the West Side Energy Station Project, the City wishes to invoke the authority provided to it in Minn. Stat. §453.58, subd. 1 and exercise the powers granted by Section 453.51 to 453.62 to include the power to:

- plan, acquire, construct, operate, maintain, repair, extend or improve one or more projects within or outside the state
- perform any act authorized by sections 453.51 to 453.62 through or by means of its officers, agents, or employees or by contract with any person



- acquire, own, hire, use, operate and dispose of personal property
- acquire, own, use, lease as lessor or lessee, operate and dispose of real property and interests in real property and make improvements thereon
- contract with any person, within or outside the state, for the construction of any project or for the sale, with or without advertising for bids, or transmission of electric energy generated by any project or for any interest therein or any right to capacity thereof, on such terms and for such period of time as its board of directors determines.
- contract for the planning, acquisition, construction, reconstruction, operation, maintenance, repair, extension, and improvement of generation and transmission facilities outside of its corporate limits or those of its members, or may contract with other public or private owners of these facilities to perform these functions, without advertising for bids, preparing final plans and specifications in advance of construction, or securing performance and payment bonds, except to the extent that its governing body determines that these actions are desirable in furtherance of the purposes of sections 453.51 to 453.62; and,

BE IT RESOLVED by the Public Utility Board and the Common Council of the City of Rochester, Minnesota, to adopt this resolution in order to fulfill the requirements of Minn. Stat. §453.58, subd. 1.

NOW, THEREFORE, BE IT RESOLVED by the Common Council of the City of Rochester that the City does hereby invoke its authority under Minn. Stat. §453.58, subd. 1 to exercise any of the powers granted in Minn. Stat. §§453.51 - 453.62 to a municipal power agency.

BE IT FURTHER RESOLVED by the Common Council of the City of Rochester that, pursuant to Minn. Stat. §453.58, subd. 2, the City Clerk is directed to publish this resolution in the City's official newspaper.

Passed by the Public Utility Board of the City of Rochester, Minnesota, this 29th day of September, 2015.

President

Secretary

FOR BOARD ACTION

Agenda Item # (ID # 4458)

Meeting Date: 9/29/2015

SUBJECT: Westside Energy Station - Permitting

PREPARED BY: Bill Cook

ITEM DESCRIPTION:

An operating permit for the planned Westside Energy Station is required prior to operation of the unit and is an important factor in obtaining bonding for the project.

Permitting tasks include:

Air Permit Application

Preparation of an Environmental Assessment Worksheet

Air Dispersion Modeling

Air Emissions Risk Analysis

Noise Analysis

SPCC Plan development

Project Management

The Board previously approved \$45,000 for this activity at the July 28, 2015 Board Meeting. Total estimated cost for the permitting and related activities is \$180,700.

Wenck Associates has been providing RPU air quality consulting services for more than 20 years. Most recently they have assisted with renewals of both the Cascade Creek and SLP permits. They have extensive knowledge of our operation and productive relationships with the various regulatory agencies.

Funding for this work will come from capital reserves which will be replenished when bonding for the project is obtained.

UTILITY BOARD ACTION REQUESTED:

Management recommends Board and Council approval of a resolution authorizing issuance of a PO in the amount of \$180,700 to Wenck Associates.

**RPU West Side Environmental Permitting
Cost Estimate**

Labor

Step	Total Labor Hours	Total Labor Cost	Total Expenses Cost	5% IT Fee	Total Expenses Cost	Subtotals	Lump Sum Cost
1 Air Permit Application	322	\$43,091	\$1,050	\$2,207	\$46,348	\$46,300	\$44,900
Costs already incurred-Kickoff Meeting	27	\$4,554	\$0	\$228	\$4,781		
MPCA pre-application meeting	6	\$1,032	\$50	\$54	\$1,136		
Gather Information	21	\$2,565	\$0	\$128	\$2,693		
Complete emission calculations	48	\$6,336	\$0	\$317	\$6,653		
Regulatory Applicability Analysis	32	\$4,544	\$0	\$227	\$4,771		
Complete Application Forms	56	\$7,232	\$0	\$362	\$7,594		
Draft application for Review	62	\$7,754	\$0	\$388	\$8,142		
Finalize and Submit Permit Application	18	\$1,982	\$1,000	\$149	\$3,131		
Tech Support during MPCA Review	40	\$5,028	\$0	\$251	\$5,279		
Meetings/ Conf Calls w/Client (4)	12	\$2,064	\$0	\$103	\$2,167		
2 EAW	372	\$44,588	\$0	\$2,229	\$46,817	\$46,800	\$45,400
Data Gathering	46	\$5,402	\$0	\$270	\$5,672		
Draft EAW	116	\$13,944	\$0	\$697	\$14,641		
Respond RPU Comments	52	\$6,280	\$0	\$314	\$6,594		
Repond to Agency Comments on First Draft	68	\$8,248	\$0	\$412	\$8,660		
Submitt Draft EAW for Public Comment	30	\$3,366	\$0	\$168	\$3,534		
Repond to Public Comments	44	\$5,280	\$0	\$264	\$5,544		
Meetings/ Conf Calls w/Client (4)	16	\$2,068	\$0	\$103	\$2,171		
3 Air Dispersion Modeling	216	\$27,168	\$300	\$1,373	\$28,841	\$28,800	\$27,900
Modeling Protocol	56	\$6,892	\$300	\$360	\$7,552		
Metdata analysis	32	\$3,992	\$0	\$200	\$4,192		
Building setup	14	\$1,670	\$0	\$84	\$1,754		
Receptor placement	10	\$1,222	\$0	\$61	\$1,283		
Two model runs (PM10, PM2.5, NO2, SO2, CO)	32	\$3,992	\$0	\$200	\$4,192		
Modeling Report	20	\$2,308	\$0	\$115	\$2,423		
Tech Support during MPCA Review	40	\$5,028	\$0	\$251	\$5,279		
Meetings/ Conf Calls w/Client (4)	12	\$2,064	\$0	\$103	\$2,167		
4 AERA	194	\$23,716	\$400	\$1,206	\$25,322	\$25,300	\$24,500
Develop submittal	194	\$23,716	\$400	\$1,206	\$25,322		
5 Noise Analyses	84	\$9,592	\$450	\$502	\$10,544	\$10,500	\$10,200
Site noise sampling and report	84	\$9,592	\$450	\$502	\$10,544		
6 SPCC	56	\$7,008	\$300	\$365	\$7,673	\$7,700	\$7,500
SPCC plan	56	\$7,008	\$300	\$365	\$7,673		
7 Project Management	120	\$19,560	\$300	\$993	\$20,853	\$20,900	\$20,300
PM at 4 hrs/week for 30 weeks	120	\$19,560	\$300	\$993	\$20,853		
Total	1364	\$174,723	\$2,800		\$186,399	\$186,300	\$180,700

Cost Estimate Assumptions:

- Any costs associated with application to MPCA will be paid by Client.
- Modeling will pass SILs for all pollutants

Attachment: Wenck's WES Env Permitting Schedule Cost Estimate 20150908 (4458 : Westside Energy Station - Permitting)



Responsive partner.
Exceptional outcomes.

Fee Schedule January 2015

<u>Classification</u>	<u>Hourly Rate</u>
Administrative Support / Technician	\$63.00
	\$70.00
	\$78.00
Professional I	\$86.00
	\$95.00
	\$103.00
Professional II	\$112.00
	\$121.00
	\$130.00
	\$138.00
Professional III	\$146.00
	\$155.00
	\$163.00
	\$171.00
Professional IV	\$181.00
	\$191.00
	\$201.00
	\$211.00
Professional V	\$221.00
	\$241.00
Officer	\$286.00

- ▲ *Classifications listed above refer to the firm's internal system for billing purposes.*
- ▲ *The term "Professional" refers to engineers, scientists and business professionals.*
- ▲ *A Technology/Communication fee of 5% will be added to each invoice, applied as a percentage of total Wenck labor costs for a given invoicing period.*
- ▲ *Subcontracted services will be billed at cost plus 15 percent.*
- ▲ *Mileage will be billed at the IRS approved rate.*
- ▲ *Invoices are due upon presentation. Invoice balances not paid within thirty (30) days of invoice date are subject to 1-1/2% (18% annual) interest or finance charge.*
- ▲ *Specialized software used on a given project will be billed at a rate of \$15.00/hour.*
- ▲ *Rates to be adjusted annually.*

Wenck Associates, Inc. | 1800 Pioneer Creek Center | P.O. Box 249 | Maple Plain, MN 55359-0249
Toll Free 800-472-2232 Main 763-479-4200 Fax 763-479-4242 Email wenckmp@wenck.com Web wenck.com

Attachment: Wenck's WES Env Permitting Schedule Cost Estimate 20150908 (4458 : Westside Energy Station - Permitting)

Air Permit Schedule

RPU receives engine Bid Packages	Sep 30, 2015
RPU selects Engine Model and provides Vendor Emissions Data	Oct 15, 2015
Draft modeling protocol to RPU	Nov 16, 2015
MPCA pre-application meeting	Dec 1, 2015
Submit modeling protocol (if needed)	Jan 5, 2016
Draft Air Permit Application to RPU	Jan 15, 2016
Submit Air Permit Application	Feb 1, 2016
Receive Draft Air Permit	May 2, 2016
Public Notice Period Begins	Jun 1, 2016
Receive Air Permit	Sep 1, 2016
Begin Construction	July 2016
Equipment First Fire	March 2018
Commercial Operation Date	June 2018

EAW Schedule

Contact EQB to confirm RGU	Sep 10, 2015
RPU receives engine Bid Packages	Sep 30, 2015
RPU selects Engine Model and provides Vendor Emissions Data	Oct 15, 2015
RGU confirmed	Nov 2, 2015
RGU pre-application meeting	Nov 16, 2015
Submit DNR & SHPO letters	Dec 1, 2015
Draft EAW to RPU	Jan 2, 2016
Submit EAW to EQB/MPCA	Jan 15, 2016
Call with RGU to discuss EAW	Feb 1, 2016
Receive RGU comments	Mar 1, 2016
Provide revised EAW to RPU with RGU comments	Mar 15, 2016
Receive RPU comments on EAW	Apr 1, 2016
Resubmit EAW to RGU	Apr 15, 2016
Public Notice Period Begins	May 16, 2016
Receive EAW Neg Dec	Sep 1, 2016
Begin Construction	July 2016
Equipment First Fire	March 2018
Commercial Operation Date	June 2018



RESOLUTION

BE IT RESOLVED by the Public Utility Board of the City of Rochester, Minnesota and that the Common Council authorize issuance of a Purchase Order for:

Wenck Associates, for permitting activities for the planned Westside Energy Station.

The amount of the PO to be ONE HUNDRED EIGHTY THOUSAND, SEVEN HUNDRED AND 00/100 DOLLARS (\$180,700.00).

Passed by the Public Utility Board of the City of Rochester, Minnesota, this 29th day of September, 2015.

President

Secretary

RESOLUTION

Resolved, That the Board of Directors of the Corporation do hereby authorize the President of the Corporation to execute and deliver to the Secretary of the Corporation a certificate of incorporation and the Charter of the Corporation, together with a copy of the same to the Secretary of the State of New York, for the purpose of incorporating the Corporation under the laws of the State of New York.

Witness my hand and the seal of the Corporation this 1st day of January, 1901.

Attest: _____
Secretary

In testimony whereof, I have hereunto set my hand and the seal of the Corporation this 1st day of January, 1901.

President

Secretary

Treasurer

Secretary

**BEFORE THE MINNESOTA OFFICE OF ADMINISTRATIVE HEARINGS
FOR THE
MINNESOTA PUBLIC UTILITIES COMMISSION**

In the Matter of the Application of Great River Energy, Northern States Power Company (d/b/a/ Xcel Energy) and others for Certificates of Need for the Cap X 345-kV Transmission Projects

OAH Docket No. 15-2500-19350-2

PUC Docket No. CN-06-1115

NOCAPX 2020 INITIAL BRIEF

I. INTRODUCTION AND SIGNIFICANT FACTS

In this docket, the Applicants unspecified have requested Certificates of Need for the projects in Phase I of at least three Phases, consisting three major lines: the Fargo to Metro line (hereinafter “Fargo”); the Brookings to Metro line (hereinafter “Brookings”) and the Metro to LaCrosse line (hereinafter “LaCrosse”) and many lower voltage and other system additions and upgrades. The 345kV lines as proposed have a very high capacity -- the capacity/thermal limits are 2428MVA, and if double circuited, “upsized” as proposed at the last minute, the capacity/thermal limits double to 4856MVA. Why are high-capacity lines needed? Why are super-sized high-capacity lines needed? These lines are not needed for any of the reasons they claim, but are driven by the MISO Midwest Market to increase electricity available for market transactions outside of Minnesota. The size, type and timing of the CapX 2020 proposal does not fit with the claimed need and is not justified. This is a case where the “need” was concocted and framed in a three-part claim to bolster odds that the project could survive scrutiny.

CapX claims that the project is needed for three interwoven purposes:

- Local Need – Community Reliability (Ex. 1, Application, p. 4.1)
- Regional System Reliability Needs – (Ex. 1, Application, p. 6.1)

CapX 2020, as proposed, is gross overkill for the minute local load need claimed, and with “upsizing,” it’s proportionately increased “upsized” overkill.

In each scenario, the local load claim overstates need, because it is using modeling assumptions that there is no local generation. Existing generation is assumed offline, and there is no new generation added. In this unrealistic scenario, the local load needs presumed for each 345kV line are still small and could be met in other ways:

Need	Fargo	Brookings	LaCrosse
Local load (MW)	Southern RRV 21 Ex. 1, App, p. 4.26 Alexandria 27-19 Ex. 1, App., p. 4.29 St. Cloud 172-230 Ex. 1, App. P. 4.34	None – see Application	Rochester 129-310 Ex. 1, App, p. 4.6 LaCrosse 132-152 Ex. 1, App, p 4.15

When the total of claimed need for the LaCrosse line in toto, at 261-462 MW, is compared against the thermal capacity of the line, at 2,050MW or if double circuited 4,100MW, it’s clear that this is greatly oversized. This overkill belies the project need – instead, it’s wanted for facilitating transactions in the MISO Midwest Market, addressed below.

The claimed need is so small that it could be easily met by other means, which others will expand upon, including local generation, Smart Grid, conservation, or updating forecasting!

Most importantly, the need is overstated. In addition to modeling performed with all local generation off line, infrastructure planned was not considered. For example, in Rochester, there are **FOUR** 161kV lines planned that were not taken into consideration, and which could well serve Rochester’s needs. In addition, RPU, the Rochester utility, has planned for new generation at the West Side substation (Ex. 100, lower left corner), where two of those four lines will be connection to serve Rochester. Ex. 157, Report on the Electric Utility Baseline Strategy for 2005-2030 Electric Infrastructure, June 2005, Summary p. S-21-S-22. Specifically, this report

recommends actions that have been taken by RPU, resulting in the Westside Substation and transmission from it to serve the city:

Consider taking options on approximately 100 acres of land within the RPU service territory near a high pressure gas line and transmission facilities under RPU control for installation of future combustion turbine capacity.

...Around 2014, assuming that new generation is required in accordance with the long range plan and that generation has not been installed in connection with the transmission issue, begin the process for installation of approximately 50-100MW of natural gas-fired generation for an inservice date of 2018. The generation should be low capital cost with as low an operating cost as is consistent with expected operating capacity factors.

Id.

Local load as a reason for CapX is not supported by the evidence. The need, even if assumed, can be met in other ways, and these small amounts, if assumed in its entirety, cannot justify a project of this size.

III. CAPX 2020 DOES NOT DEMONSTRATE REGIONAL NEED, ONLY A REGIONAL "WANT"

The statutory criteria that address regional need are:

- (1) the accuracy of the long-range energy demand forecasts on which the necessity for the facility is based;*
- (2) the effect of existing or possible energy conservation programs under sections 216C.05 to 216C.30 and this section or other federal or state legislation on long-term energy demand;*
- (3) ... in the case of a high-voltage transmission line, the relationship of the proposed line to regional energy needs, as presented in the transmission plan submitted under section 216B.2425;*
- (4) promotional activities that may have given rise to the demand for this facility;*
- (9) with respect to a high-voltage transmission line, the benefits of enhanced regional reliability, access, or deliverability to the extent these factors improve the robustness of the transmission system or lower costs for electric consumers in Minnesota;*

CapX 2020 regional need claims are distinct from regional reliability claims.

The second is really kind of the overall support for reliability. And again, this relates more in line with the Vision study in the sense of looking at long-term, the year 2020 load levels, and that these projects are common to having an adequate system in place to serve the load in the year 2020.

The resource requirements were developed to maintain the reserve requirements of RPU. The current level of reserves is required by MAPP to be 15 percent of the amount of load requirements above the CROD amount.

Traditional Options

The traditional options included new resources fueled by coal and natural gas. These options are discussed in more detail in the following paragraphs.

Gas-Fired Options

Gas fired generation today is performed by combustion turbines operating in simple cycle or combined cycle mode. Simple cycle combustion turbines operate similar to jet aircraft engine technology. These units vent their exhaust direct to a stack and typically have efficiencies above 10,000 Btu per kWh. Combined cycle units include the simple cycle machine with its exhaust vented into a heat recovery steam generator (HRSG) and then through a stack. The steam produced by the HRSG drives a steam turbine/electric generator combination as in a typical steam driven plant. Combined cycle plants have efficiencies in the upper 6000 Btu per kWh range.

RPU currently operates two simple cycle combustion turbines. The new unit added at Cascade Creek is the latest to be added to the system. These units are typically operated when the load increases on the system during a few hours of the day. Simple cycle units typically have the lowest capital cost of larger generating options. Project costs in the range of \$400 to \$600 per kW are typical, with the smaller units having the higher cost per kW. Due to their efficiency, these units are typically operated at capacity factors below 15 to 20 percent.

Combined cycle plants have higher capital costs than simple cycle machines, due to the steam cycle cost. Project costs for these machines range from \$500 per kW to \$750 per kW, again with the smaller plants having the higher cost per kW. These plants have been the predominate plant installed by merchant independent power producers over the past few years and are expected to account for the majority of the installed capacity for the foreseeable future. Since these plants operate at higher efficiencies, they operate at capacity factors above those of simple cycle machines and are typically between 25-50%.

Gas-fired combustion turbines have nitrous and carbon oxides as their main emissions. Simple cycle units use water in emission control and in inlet air fogging systems. Combined cycle units also use water in cooling cycles for the steam condensing and boiler makeup.

The existing gas fired generation on RPU's system is used primarily for peaking and reserve service. The gas supply for these units is operated on a non-firm basis. Operating with a non-firm fuel supply allows the energy to be produced for essentially the cost of the gas commodity and a small delivery charge. RPU could develop gas-fired units within its service territory without the need for partners due to the lower effect of economies of scale.

2005

9. Discussions with the OWEF should proceed to determine if additional output is available. If it is not, then wind energy should be pursued as the next renewable option to satisfy energy obligations under the REO. Based on the cost and output of photovoltaic units, solar photovoltaic is the most expensive renewable option for the RPU to pursue.
10. Based on information from RPU, the SMMPA is in discussions on acquisition of additional resources which could affect the cost of capacity and energy under the CROD. At the current time, there is insufficient information to be able to determine how DSM programs could reduce the impact of these potential costs. If SMMPA moves ahead with resource acquisitions based on RPU impacts to the SMMPA resource mix, RPU should discuss with SMMPA the ability of DSM options to reduce the resource need impacts to SMMPA.

Recommendations

Based on the analysis performed for RPU in this effort, Burns & McDonnell is of the opinion that RPU should:

Over the next few months:

1. Minimize its involvement in reviewing participation in regional coal projects. RPU is not in need of additional coal capacity with the current 216MW CROD level and load forecast until approximately 2020. Therefore, participation in any coal plant currently being developed does not appear to be advantageous.
2. Pursue firming up the transmission system to allow firm delivery of the CROD amount of 216MW.
3. Improved transmission import capability should be reviewed with area utilities to allow increased access to market capacity. Although the resource plans presented in this study anticipate future resource additions, there is also continued reliance on market purchases to meet future load growth.
4. Consider taking options on approximately 100 acres of land within the RPU service territory near a high pressure gas line and transmission facilities under RPU control for installation of future combustion turbine capacity.
5. Develop a parallel path project to accelerate installation of combustion turbine capacity required in the long term plan to maintain system reliability should the selected transmission upgrade project be delayed.
6. Develop the upgrade plan and timing for SLP Units 1-4 for the addition of emission controls and other life extension modifications.
7. RPU should monitor the operations of the MISO Day 2 market to determine how to participate in the market over the next few months.

Between 2005 and 2015:

1. RPU should continue to design and market DSM programs to achieve the levels of forecast reductions for demand and energy. Periodic comparison of actual results to those forecasts should be made to determine if adjustments in the forecast results are necessary.
2. RPU should take advantage of renewable energy from the Zumbro River resource to the full extent of its output. The renewable energy from the OWEF should be considered to provide the RPU biomass energy requirements. Purchases above the requirements should be compared to the cost of other energy available.
3. Complete the transmission upgrade or the installation of additional combustion turbines to maintain system reliability.
4. If the transmission upgrade is completed, compare the market conditions at the time to the installation of additional generation resources within the service territory.
5. Review the then current generation technology, fuel options and RPU needs against the long range plan developed herein to determine if new technologies or reduced RPU needs have usurped the analysis and recommendations associated with current options.
6. Complete the modifications to the SLP Unit 4. Initiate the emission controls to be applied to Units 1-3 in light of their expected operation.
7. Around 2014, assuming that new generation is required in accordance with the long range plan and that generation has not been installed in connection with the transmission issue, begin the process for installation of approximately 50 to 100MW of natural gas-fired generation for an in service date of 2018. The generation should be low capital cost with as low an operating cost as is consistent with expected operating capacity factors.

Between 2015 and 2030:

1. Install generation as necessary and prudent using the long range plan prepared above as a guide and comparing the assumptions used herein to the existing market conditions and resultant DSM impacts to the RPU needs. The generation additions should follow the in service schedule identified in portfolio 45216-LMS100-50Coal as modified by DSM results.
2. Around 2015, depending on the status of the RPU system needs, the regional market for base load projects being developed, and other technology considerations for resource options, RPU should consider taking an option on approximately 1500 acres to support the development of a coal-fired generation plant within the RPU service territory. The site should have access to rail, electric transmission and water infrastructure to support several hundred megawatts of generation.

3. If development of a local coal unit appears likely, purchase the necessary land and begin the development process around 2017 for an in service date of 2025.

In discussions with RPU, it is uncertain what will happen to the CROD amount past 2030, which is the current termination date of the SMMPA contracts with its members. If the CROD energy is not available, then RPU will be in need of essentially 250MW of coal capacity. This amount of capacity requirement would support the construction of a unit within the RPU service area by RPU as the sole owner. With this amount of capacity inside the RPU service area, the import capability required of the transmission system would be reduced.

Due to the length of time it takes to construct transmission lines and complete the upgrade, it is recommended that RPU develop a parallel project to install similar Twin Pac units to maintain the required probable outage hour levels as would be maintained with the transmission upgrade. Should the upgrade be delayed, the generating units could be installed within RPU's service area and used for transmission reliability service until the upgrade was completed.

Summary

Overall, RPU is in relatively good condition to meet its load requirements for several years without any additions to its resource mix. Challenges to RPU in the area of transmission reliability and understanding what future market operation impacts will bring are typical of the environment in which utilities operate today and will be a primary focus of RPU. Plant related issues will include the investment necessary to bring the SLP into compliance with environmental regulations currently taking affect.

Based on the analysis performed for RPU in this effort, Burns & McDonnell is of the opinion that RPU should:

Over the next few months:

1. RPU is not in need of additional coal capacity with the current CROD level and load forecast until approximately 2020. Therefore, participation in any coal plant currently being developed does not appear to be advantageous.
2. Pursue firming up the transmission system to allow firm delivery of the CROD amount of 216MW.
3. Consider taking options on approximately 100 acres of land within the RPU service territory near a high pressure gas line and transmission facilities under RPU control for installation of future combustion turbine capacity.
4. Develop a parallel path project to accelerate installation of combustion turbine capacity required in the long term plan to maintain system reliability should the selected transmission upgrade project be delayed.
5. Develop the upgrade plan and timing for SLP Units 1-4 for the addition of emission controls and other life extension modifications.

Between 2005 and 2015:

1. Complete the transmission upgrade or the installation of additional combustion turbines.
2. If the transmission upgrade is completed, compare the market conditions at the time to the installation of additional generation resources within the service territory.
3. Review the then current generation technology, fuel options and RPU needs against the long range plan developed herein to determine if new technologies or reduced RPU needs have usurped the analysis and recommendations associated with current options.
4. Complete the modifications to the SLP Unit 4. Initiate the emission controls to be applied to Units 1-3 in light of their expected operation.
5. Around 2010, depending on the status of the RPU system needs, the regional market, and other technology considerations for resource options, RPU should consider taking an option on approximately 1500 acres to support the development of a coal-fired generation plant within the RPU service territory. The site should have access to rail, electric transmission and water infrastructure to support several hundred megawatts of generation.
6. Around 2012, assuming that new generation is required in accordance with the long range plan and that generation has not been installed in connection with the transmission issue, begin the process for installation of approximately 50 to 100MW of natural gas-fired generation for an in service date of 2016. The generation should be low capital cost with as low an operating cost as is consistent with expected operating capacity factors.

Between 2015 and 2030:

1. Install generation as necessary and prudent using the long range plan prepared above as a guide and comparing the assumptions used herein to the existing market conditions. The generation additions should follow the in service schedule identified in portfolio 45216-LMS100-50Coal.
2. If development of a local coal unit appears likely, purchase the necessary land and begin the development process around 2015 for an in service date of 2020.
